



***Welcome to ...***

## **Public Health INsights & INnovation**

**Contributing to and Applying the Evidence Base of Public Health**

Join via: <https://connect.iu.edu/ph-insights-innovation/>



**Sandra Cummings, MSW**  
Chronic Disease Coordinator  
**Marion County Public Health  
Department**  
3838 N. Rural Street  
Indianapolis, IN 46205 USA  
Office (317) 221-2096  
Mobile (317) 931-9895  
[SCummings@MarionHealth.org](mailto:SCummings@MarionHealth.org)



**Cynthia Stone DrPH, RN**  
Associate Professor  
**Indiana University**  
**Richard M. Fairbanks**  
**School of Public Health**  
Direct: 317-278-0761  
Cell: 317-372-2871  
[cylstone@iu.edu](mailto:cylstone@iu.edu)

# Objectives for Domain 10 – Contributing to and Applying the Evidence Base of Public Health

Participants will be able to 1) identify and use the best available evidence for making informed public health practice decisions, and 2) promote understanding and use of the current body of research results, evaluations, and evidence based practices with appropriate audiences.

National Public Health Accreditation Board Standards and Measures, Version 1.5

<http://www.phaboard.org/wp-content/uploads/SM-Version-1.5-Board-adopted-FINAL-01-24-2014.docx.pdf>

# STANDARD 10.1: Identify and use the best available evidence for making informed public health practice decisions.

Measure 10.1.1 A Applicable evidence based and/or promising practices identified and used when implementing new or revised processes, programs, and/or interventions

Measure 10.1.2 T/S Fostered innovation in practice and research

# STANDARD 10.2: Promote understanding and use of the current body of research results, evaluations, and evidence-based practices with appropriate audiences.

Measure 10.2.1 A Protection of human subjects when the health department is involved in or supports research activities

Measure 10.2.2 A Access to expertise to analyze current research and its public health implications

Measure 10.2.3 A Communicated research findings, including public health implications

Measure 10.2.4 S Consultation or technical assistance provided to Tribal and local health departments and other public health system partners in applying relevant research results, evidence-based and/or promising practices

Measure 10.2.4 T Technical assistance provided to the state health department, local health departments, and other public health system partners in applying relevant research results, evidence-based and/ or promising practices

# Domain 10: Contribute to and Apply the Evidence Base of Public Health

Cynthia Stone DrPH, RN

January 29, 2016



RICHARD M. FAIRBANKS  
SCHOOL OF PUBLIC HEALTH  
INDIANA UNIVERSITY  
IUPUI

# Outline

- What is Domain 10?
- What is evidence based public health?
- What are resources to use to meet Domain 10?
- Examples of Domain 10



# Domain 10: Contribute to and Apply the Evidence Base of PH

- Standard 10.1 Identify and Use the Best Available Evidence for Making Informed Public Health Practice Decisions
- Provide 2 examples from programs in different areas one must address chronic disease or preventing chronic disease



## Domain 1.1.1b.

- Describe how the evidence-based or promising practice was identified and incorporated into the design or re-design of the program





# What is evidence based public health and why is it important?

- What is EBPH?
  - Definition1-EBPH is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of communities and populations in the domain of health protection, disease prevention, and health maintenance and improvement (health promotion) (Jenicek, 1997)



# Definition EBPH continued

- Definition 2-EBPH is the development, implementation, and evaluation of effective programs and policies in public health through application of principles of scientific reasoning, including systematic uses of data and information systems and appropriate use of program-planning models (Brownson, Gurney, & Land, 1999; Brownson, Baker, Leet, & Gillespie, 2003)



# Definition EBPH continued

- Definition 3- EBPH is the process of integrating science-based interventions with community preferences to improve the health of populations (Kohatsu et al, 2004)



# Definition of EBPH

- Combining all 3 definitions (key points)
  - Development of information
  - Based on scientific principles
  - Used to inform public health practice and to make public health practice more effective, efficient and equitable (Goldsteen, Goldsteen, & Dwelle, 2015)



# Why EBPH?

- Public health practice needs to be accountable and requires evaluation
- Public Health practice is usually evaluated on:
  - Effectiveness
  - Efficiency
  - Equity



- So public health performance must answer the question: How effective, efficient, and equitable is public health in achieving its mission to prevent disease, injury disability and premature death by “assuring conditions in which people can be healthy?” (IOM, 1988, p. 1)



# Effectiveness

- Effectiveness examines if the desired benefits of public health programs, policies and services are achieved



# Efficiency

- Efficiency focuses on how the benefits achieved by public health compare to the resources that were used to realize them
- It also examines if other practices would have achieved greater benefits or been less costly?





# Equity

- Equity examines the fairness and effectiveness of policies to minimize population health disparities



# Relationship of concepts

- The three concepts are complementary:
- Improve effectiveness, while holding resources steady increases efficiency; increases in efficiency may create opportunities for improved effectiveness and equity.



# What are some PH performance indicators?

- Food inspection services (number of foodborne illnesses)
- Overall effectiveness of county services (premature death rates)
- Health education programs (incidence rates of specific diseases)
- Set benchmarks or standards based on previous years performance



# Evidence based public health performance evaluation levels

- Individual program, policy or service level or
- Population level using population mortality and morbidity measures



# Evaluation at program or service level

- Identified goal with targets at defined population
- Structural (resources available and used- money, staff time, knowledge and skills)
- Process (implementation of what was planned and how well it was done)
- Outcome (expected results of implementation, short term or longer term, if goals were met)



# Example at program level

- Problem: high level of bullying in high school
- Program: theater production on intolerance
- Structural: planned using local youth
- Process: examples came from focus groups
- Outcomes: increase knowledge after the performance, more discussion about intolerance over the school year and decrease in bullying events by the end of the year



# Population level outcomes

- Infant mortality rate
- Healthy life expectancy (HALE)
- Life expectancy
- Year of potential life lost (YPLL)
- Quality adjusted life years (QALY)
- Disability-adjusted life years (DALY)
- Mortality rate
- Age-adjusted mortality rate



# Evaluation process of evidence

- Criteria to evaluate evidence:
- Research good enough to support decision to use the recommendations and findings?
- What are the research outcomes?
- Is the research transferable?
- (Rychetnik, 2006)





# Sources for EBPH

- Agency for Healthcare Research and Quality: Electronic preventive services selector practical tool for preventive, screening, and counseling services [www.ahrhq.gov](http://www.ahrhq.gov)
- Association of State and Territorial Health Officials: archives of EBPH initiatives and resources [www.astho.org](http://www.astho.org)
- CDC: The Guide to Community Preventive Services provides a summary of effective community interventions [www.thecommunityguide.org](http://www.thecommunityguide.org)



# Hierarchy of evidence: GRADE Method

- Type 1: Randomized clinical trials (RCT)
- Overwhelming evidence from observational studies
- Type2: RCT with important limitations or strong evidence in observational
- Type 3 observational studies or RCT notable limits
- Type 4: clinical experience and observations, observational studies with important limitations, RCT with several major limits (GRADE, 2015; ACIP, n.d.)



# Type of evidence

- Tied to study design and limits in study design
- Tied to implementation , imprecision of estimates
- Variabilities in findings
- Indirectness of evidence
- Publication bias
- Dose-response gradient and other plausible bias



# Evidence for practice

- Recommendations to use evidence:
- Category A: recommendations apply to all persons in a specified group
- Category B: recommendations indicate there should be individual decision making, different choices for different persons



# Evidence for public health

- Need information on the intervention (design, delivery and characteristics of group)
- Need information on context (social and organizational settings of intervention)
- Information on interaction between intervention and context (skill and expertise of professionals doing the intervention; cultural characteristics of community; politically acceptable)



# Resources for EBPH

- The Cochrane Collection: library of systematic review of health care interventions (Health Promotion and Public Health Field-  
[www.Cochrane.org](http://www.Cochrane.org)
- E-Roadmap to Evidence –Based Public Health Practice: public health practice programs and tutorial on identifying and using programs [www.healthsolutions.org](http://www.healthsolutions.org)



# Resources for EBPH

- National Assoc. of County and City Health Officials: model practices searchable data base-community, environment and public health categories: [www.naccho.org](http://www.naccho.org)
- New York State Department of Health: Community Health Assessment Clearinghouse: resources for CHA [www.health.state.ny.us/](http://www.health.state.ny.us/)



# Resources for EBPH State

- IndyIndicators: Best and Promising Practices  
<http://indyindicators.iupui.edu/bestpractices.aspx>





## Domain 10.1.2

- Document working relationship with academic institutions, research centers or institutes (2 examples, formal MOU, meeting minutes, emails)
- Document how engaged with partners in agenda setting, practice-based research or other research efforts (2 examples, Community Based Participatory Research, IRB application, minutes of meetings)



# Domain 10: Standard 10.2

- Promote Understanding and Use of the Current Body of Research Results, Evaluations, and Evidence-based Practices with Appropriate Audiences



# Domain 10.2

- Adopt human subjects research protection policy (one policy such as IRB is required from academic partner or own internal IRB process)
- If no human subjects research is occurring a statement of that effect can be used for documentation.



# Domain 10.2.2

- Availability of expertise (internal or external for analysis of research) 2 examples or one list
  - List of experts used and their training



## Domain 10.2.3

- Communication of research findings and their public health implications to stakeholders, public health system partners and/or the public (2 examples)
  - Discuss with health department governing body
  - Share at a community meeting
  - Must share with state health department
  - Examples: research report, web posting, email list-serve, newspaper article, press release



# EBPH Examples from Indy Indicators

- Required Influenza vaccination for children in Licensed Child Care or Preschool Programs (2014) CT Department of Health source CDC MMWR
- National Diabetes Prevention Program (2013) CDC
- Be a Hero buy Locally Grown (2013) Community Involved in Sustaining Agriculture (Effective Practice)



# Required Influenza Vaccination

- 2014
- HCI Rating: Evidence-Based Practice
- Concept: An average of 20,000 children younger than 5 years old are hospitalized each year because of flu complications nationwide. To reduce the risk of hospitalization from complications of influenza, the American Academy of Pediatrics (AAP) and the Centers for Disease Control and Prevention (CDC) now recommend routine annual influenza vaccination of children older than 6 months. In September 2010, Connecticut became the second U.S. state (after New Jersey) to implement regulations requiring that all children aged 6–59 months receive at least 1 dose of the influenza vaccine annually to attend a licensed child care program. One year later, this requirement was expanded to include all children aged 24–59 months who were enrolled in a preschool program.
- Goal: The goal of requiring that all Connecticut children receive at least 1 dose of influenza vaccine each year to attend a licensed child care program and preschool setting is to reduce influenza transmission and decrease influenza-associated hospitalizations statewide.



# Influenza Vaccination policy continued

- Outcomes: To evaluate the impact of this regulation on vaccination levels and influenza-associated hospitalizations during the 2012–13 influenza season, vaccination data from U.S. and Connecticut surveys and the Emerging Infections Program (EIP) were analyzed. After the regulation took effect, vaccination rates among Connecticut children aged 6–59 months increased from 67.8% during the 2009–10 influenza season to 84.1% during the 2012–13 season. During the 2012–13 influenza season, Connecticut had the greatest percentage decrease (12%) in the influenza-associated hospitalization rate from 2007–08 among children aged =4 years across all 11 EIP surveillance sites. Furthermore, the ratio of the influenza-associated hospitalization rates among children aged =4 years to the overall population rate (0.53) was lower than for any other EIP site. Data from multiple surveys were used to estimate vaccination rates among children aged 6–59 months in Connecticut. During 2009–10, the season before the state's influenza vaccination requirement took effect, 67.8% (95% CI = 61.1%–74.5%) of Connecticut children aged 6–59 months received a vaccination for seasonal influenza. During the 2012–13 season, the seasonal influenza vaccination rate increased to 84.1% (CI = 78.2%–90.0%). The increase of 16.3 percentage points in Connecticut was greater than the national increase of 11.9 percentage points (from 57.9% to 69.8%), comparing the same age group for the same two seasons; however the difference is not statistically significant. Among 11 EIP sites during the 2007–08 influenza season, Connecticut ranked third-highest in incidence of influenza-associated hospitalizations among children aged =4 years (58.6 per 100,000). During the 2012–13 season, Connecticut dropped to seventh (51.5 per 100,000) and was one of only two sites to record a decrease in incidence (12%) among children aged =4 years. As of December 31, 2012, 87.1% of children enrolled in licensed child care settings had received =1 dose of influenza vaccine for the 2012–13 season. In total, 5.1% of children enrolled were listed as exempt from influenza vaccination for either religious or medical reasons, compared with 1.7% for all other vaccinations.
- Location: > >
- Organization: Connecticut Department of Public Health
- Contact: James L. Hadler hadler-epi@att.net





# National Diabetes Prevention

- Time Began: 2013
- HCI Rating: Evidence-Based Practice
- Concept: The National Diabetes Prevention Program (DPP) is a lifestyle change program for preventing type 2 diabetes among individuals who are pre-diabetic (impaired glucose tolerance). The program teaches participants strategies for incorporating physical activity into daily life and eating healthy. Through a 16-course curriculum, lifestyle coaches help participants identify emotions and situations that can sabotage their success. The Centers for Disease Control and Prevention funds the program through six organizations in order to reach the most people who are at high risk for diabetes, including: The American Association for Diabetes Educators, America's Health Insurance Plans, Black Women's Health Imperative, National Association of Chronic Disease Directors, Optum Health Care Solutions, and YMCA of the USA. Funded organizations will offer the program, provide information to employers about offering the program, and work with third-party payers to facilitate performance-based reimbursement directly to organization delivering the lifestyle change program. The program also maintains a registry of programs that are recognized for effective delivery of lifestyle change intervention programs to prevent type 2 diabetes.
- Goal: The National Diabetes Prevention Program encourages collaboration among federal agencies, community-based organizations, employers, insurers, health care professionals, academia, and other stakeholders to prevent or delay the onset of type 2 diabetes among people with prediabetes in the United States.
- Outcomes: In a 10-year effectiveness and cost-effectiveness study, the relative risk reduction for participants who adhered to the lifestyle change program and maintained a 5% reduction in initial body weight was 49.4%. The lifestyle change program was found to be more cost-effective than intervention with metformin (oral diabetes treatment medication) or placebo.
- Location: > > USA
- Organization: Centers for Disease Control & Prevention



# Be a Local Hero, Buy Locally Grown

- Time Began: 2013
- HCI Rating: Effective Practice
- Concept: The Be a Local Hero, Buy Locally Grown public awareness and marketing campaign is the country's longest running and most comprehensive program to encourage buying local farm products. The Local Hero campaign uses paid print, radio, and web advertising combined with public relations events and press releases to engage the public to support local farmers. Farms and businesses that join the campaign are included in networking events and receive discounts on products, events, and advertising rates. Members are included in online and print guides of local farmers. They are also permitted to use the widely recognized Local Hero logo, and receive a starter kit of Local Hero price cards, stickers, and signage.
- Goal: The goal of the Be a Local Hero, Buy Locally Grown program is to raise awareness and sales of locally grown farm products.
- Outcomes: The Local Hero campaign includes more than 227 farms, 51 restaurants, 31 retailers, 6 landscape/garden centers, 15 specialty producers and 26 institutions. Two thirds of participating farms reported product sales increase in 2010. Nearly all (90%) participating farmers were satisfied with the Local Hero membership program. Market research shows that over 82% of residents of Franklin and Hampshire counties recognize the Local Hero logo, and people who recognize the logo are twice as likely to shop at their local farm stand, farmers' market, or select local products at their grocery store.
- Location: > > Massachusetts
- Organization: Community Involved in Sustaining Agriculture
- Contact:
- Community Involved in Sustaining Agriculture One Sugarloaf Street South Deerfield, MA 01373
- [info@buylocalfood.org](mailto:info@buylocalfood.org)
- <http://www.buylocalfood.org/>



# Other public health system efforts for improvement

- Accreditation and Credentialing
- Council on Education for Public Health
- Core Competencies for Public Health Professionals Project (Council on Linkages Between Academia and Public Health Practice)
- National Board of Public Health Examiners-CPH exam
- Public Health Accreditation Board



# Other PH System efforts for improvement

- Healthy People
- Report Card Initiatives
- County Health Rankings (Population health outcomes come from several factors
  - Length of Life (50%)
  - Quality of Life (50%)



# County Health Rankings

- Physical Environment (10%):
  - air and water quality, housing and transit
- Health Behavior (30%):
  - Tobacco use, diet and exercise, alcohol and drug use, sexual activity
- Clinical Care (20%):
  - Access and quality of care
- Social and Economic (40%):
  - Education, employment, income, family & social support, safety



# County Health Rankings-other data used

- Social and economic:
  - Education, employment, income, community safety
- Outcomes:
  - Poor mental health days, poor physical health days, geographic disparity, cardiovascular deaths, cancer deaths, diabetes
  - County Health Roadmaps to help make changes to improve the communities health



# Contributing to Evidence Base of PH

- Publish reports on your website, academic partner or community partner websites
- Publish articles- faculty are always looking for these opportunities and can help you as a secondary author
- Send in abstracts to present at state, regional or national programs (posters, roundtable or podium presentations all count) then turn these into publications
- Share all of these with your local media outlets



# Additional References

- Ahmed FUS. (2013). Advisory Committee on Immunization Practices handbook for developing evidence-based recommendations. Version 1.2 Atlanta, GA: CDC. Available from: <https://www.cdc.gov/vaccines/acip/recs/GRADE/about-grade.html#resources>
- Brownson, R.C., Baker, E.A., Leet, T.L., & Gillespie, K.N. (2003). *Evidence-based public health*. New York, NY: Oxford University Press.
- Brownson, R.C., Gurney, J.G., & Land, G.H. (1999). Evidence-based decision making in public health. *Journal of Public Health Management and Practice*, 5, 86-97.





# Additional References

- Goldsteen, R.L., Goldsteen, K., & Dwelle, T.L. (2015). *Introduction to Public Health: Promises and Practices*. New York, NY: Spring Publishing.
- Grading of Recommendations Assessment, Development and Evaluation (GRADE). (2015). <http://www.gradeworkinggroup.org/>
- Institute of Medicine, Committee on the Study of the Future of Public Health. (1988). *The future of public health*. Washington, DC: National Academies Press.



# Additional References

- Jenicek, M. (1997). Epidemiology, evidence-based medicine, and evidence-based public health. *Journal of Epidemiology*, 7(4), 187-197.
- Kohatsu, N.D., Robinson, J.G., & Torner, J.C. (2004). Evidence-based public health: An evolving concept. *American Journal of Preventive Medicine*, 27 (5), 417-421.
- Rychetnik, L., Frommer, M., Hawe, P., & Shiell, A. (2002). Criteria for evaluating evidence on public health interventions. *Journal of Epidemiology and Community Health*. Available from: <http://jech.bmj.com/content/56/2/119.full>



# Questions

- Questions
- Contact information
- Cynthia Stone [cylstone@iu.edu](mailto:cylstone@iu.edu)



# Domain 10: Contribute to and Apply the Evidence Base of Public Health

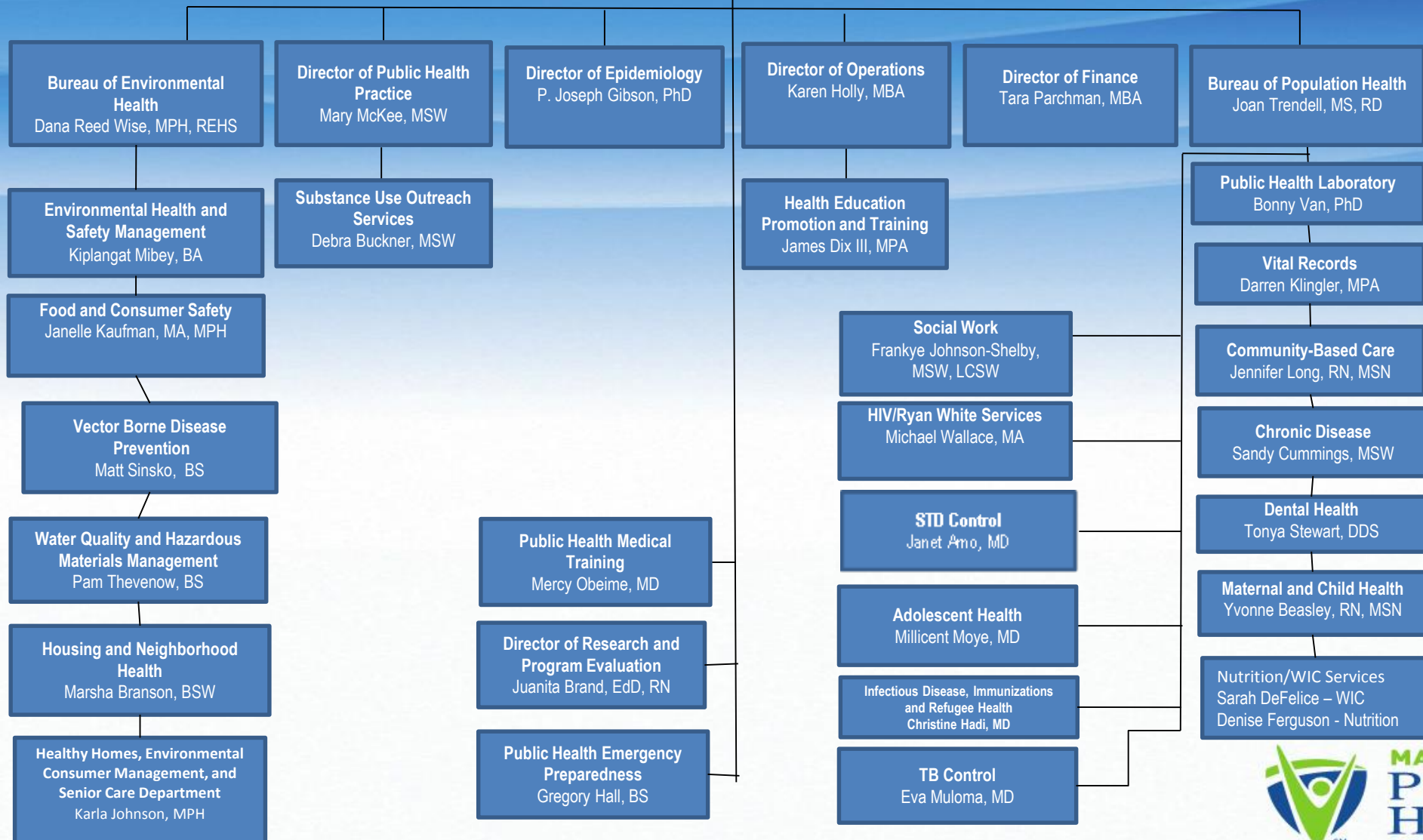
Sandra Cummings, MSW

Chronic Disease Coordinator

January 29, 2016

*Four examples of chronic disease-related programs/initiatives will be shared to illustrate integration of evidence-based information into programmatic decision making.*

**Marion County Public Health Department**  
**Virginia A. Caine, M.D.**  
**Director**



**MARION COUNTY**  
**PUBLIC HEALTH**  
DEPARTMENT

**Prevent. Promote. Protect.**





MARION COUNTY  
**PUBLIC  
HEALTH**  
DEPARTMENT

Prevent. Promote. Protect.

# Standard 10.1

- Identify and use the best available evidence for making informed public health practice decisions.



# ABCs of Diabetes

- Diabetes self-management education offered in community sites, weekdays and evenings
- Eight hours of classroom instruction
- RN and RD provide individual consults
- Feedback loop with physician
- AADE Accredited

# Relevant Evidence

- Healthy People 2020 (D – 14)
- The Guide to Community Preventive Services (The Community Guide)
- American Association of Diabetes Educators Education Standards
- Annual Review/On-going CQI

# Smoke-free Policies in Multi-family Housing

- Promote smoke free policies, provide education on benefits, logistics, and overall landscape of the issue
- Work with and through Smoke Free Indy and others
- Assess presence of smoke free apartment communities
- Provide technical assistance, including signage, lease review, resident communication

# Relevant Evidence

- EPA
- American Lung Association
- Live Smoke Free - Minnesota
- HUD
- ISDH – Tobacco Commission



# Healthier Retail Food

- Scattering and Cultivating Seeds
- Identifying low-access geographic areas via categorizing retail establishments
- Exploring small stores initiatives
- Vending in municipal sites
- Vending at MCPHD
- Work with Indy Food Council and Top 10 Coalitions

# Relevant Evidence

- Healthy People 2020 (NWS – 4)
- CDC
- The Food Trust
- HHS and GSA's Health and Sustainability Guidelines for Federal Concessions and Vending Operations

# Standard 10.2

- Promote understanding and use of the current body of research results, evaluations, and evidence-based practices with appropriate audiences.

# Sodium Reduction in Communities Program

- CDC National Program – one of six communities in our cohort
- Three year intervention
- Working with Eskenazi Health to align all retail food sales with sodium guidelines
- Working with Head Start to reduce sodium by 10% per year in foods served
- IU Bloomington providing evaluation



# Relevant Evidence

- Healthy People 2020 (NWS – 19)
- Institute Of Medicine
- [CDC's Salt Site](#)
- USDA Dietary Guidelines

# Sources

[The Community Guide](#)

[Healthy People 2020](#)

[CDC's Assessing Retail Food Environments](#)

[CDC's Salt Site](#)

[Institute of Medicine](#)

[USDA Dietary Guidelines](#)

[American Lung Association](#)

[Live Smoke Free – Minnesota](#)

[The Food Trust](#)

[GSA's Health and Sustainability Guidelines for Federal Concessions and Vending Operations](#)

[National Prevention Strategy](#)

## Contact Information:

Sandra Cummings, MSW  
Chronic Disease Coordinator  
(317) 221-2096  
[scummings@marionhealth.org](mailto:scummings@marionhealth.org)





# Questions, Comments?

## Presenters:



**Sandra Cummings, MSW**  
Chronic Disease Coordinator  
**Marion County Public Health  
Department**  
3838 N. Rural Street  
Indianapolis, IN 46205 USA  
Office (317) 221-2096  
Mobile (317) 931-9895  
[SCummings@MarionHealth.org](mailto:SCummings@MarionHealth.org)



**Cynthia Stone DrPH, RN**  
Associate Professor  
**Indiana University**  
**Richard M. Fairbanks  
School of Public Health**  
Direct: 317-278-0761  
Cell: 317-372-2871  
[cylstone@iu.edu](mailto:cylstone@iu.edu)

# Domain 10 Resources

Title	Description	Link
Association of State and Territorial Health Officials (ASTHO)	Library of sample documentation per domain	<a href="http://www.astho.org/accreditation-library/">http://www.astho.org/accreditation-library/</a>
Community Guide PHAB Crosswalk (CG)	Crosswalk of PHAB 1.5	<a href="http://www.thecommunityguide.org/uses/Community%20Guide-PHAB%20Crosswalk%20Version%201.pdf">http://www.thecommunityguide.org/uses/Community%20Guide-PHAB%20Crosswalk%20Version%201.pdf</a>
National Association of County and City Health Officials (NACCHO)	Examples of documentation for Domain 10	<a href="http://www.naccho.org/topics/infrastructure/accreditation/upload/Domain-10.pdf">http://www.naccho.org/topics/infrastructure/accreditation/upload/Domain-10.pdf</a>
Public Health Accreditation Board (PHAB)	Tools, resources, information, research on voluntary public health accreditation	<a href="http://www.phaboard.org/">http://www.phaboard.org/</a>

Need 1.5 CEUs? Email  
[president.elect@insophe.org](mailto:president.elect@insophe.org)



*Thank you for attending...*

**Public Health INsights & INnovation**

Was this webinar helpful to you?

<http://survey.constantcontact.com/survey/a07ec5c5ssuijnd5j8l/start>



**Save the Date!**

**Please join us on February 26:  
Maintaining Administrative and Management Capacity**